

III. Health Status of Mississippi Population

Any attempt to improve the health of a population must first assess the current health status of that population. However, no universally accepted definition of “health” exists. The World Health Organization defines health as ... “a state of complete physical, mental, and social well being; not merely the absence of disease or infirmity.” This definition implies that everyone, including the ill or disabled, should have the opportunity to live up to his or her own potential.

Various statistical measurements are accepted as indicators of a population’s general state of health. These indicators can then help to target actions and focus resources to improve health. In assessing the health status of Mississippians, the *State Health Plan* focuses on natality, mortality, and morbidity factors. Where data are available, the *Plan* contrasts Mississippi data to the United States. The *Plan* also discusses significant variations within the state by age, race, sex, or geographic area.

The Bureau of Health Informatics of the Mississippi State Department of Health (MSDH) compiles the relevant information for this chapter. In most cases, 2001 statistics are the most current available.

Natality Statistics

Live Births

Mississippi experienced a 4.1 percent decrease in live births from the previous year. In 2001, live births numbered 42,277, compared to 44,075 registered in 2000. Of these, 53.9 percent (22,798) were white and 46.1 percent (19,479) were non-white. Table III-1 provides birth data for the last five years.

A physician attended 97.5 percent of all in-hospital live births delivered in 2001 (41,201). Nurse midwife deliveries accounted for 884 live births, a decrease of 2.2 percent from the 904 reported in 2000. Fifty-five percent (484) of the nurse midwife deliveries were non-white.

More than 98 percent of expectant mothers received some level of prenatal care in 2001. Fourteen percent (5,834) were in the second trimester before receiving care and approximately 2.2 percent (917) were in the third trimester. These proportions have not changed significantly since the 1980's. White mothers usually receive initial prenatal care much earlier in pregnancy than do non-whites.

More than 99 percent of the live births occurred in the 15 to 44 years age group. Forty-six percent of all live births (19,590) were to unmarried women, with 73.9 percent being non-white. Mothers under the age of 15 gave birth to 193 children; 88.1 percent (170) were non-white.

Gender ratios of live births have remained unchanged for several years. In 2001, 50.9 percent (21,516) of the births were male and 49.1 percent (20,761) female. August, July, and October remained the peak months for births in 2001.

The birth rate in 2001 was 14.9 live births per 1,000 population; the fertility rate was 66.6 live births per 1,000 women aged 15-44 years. Table III-1 and Figures III-1 and III-2 provide information on birth and fertility rates by race for the past five years.

The MSDH uses birthweight and gestational age obtained from birth certificates to monitor fetal development. Low birthweight — less than 5.5 pounds (2,500 grams) at birth, and prematurity — gestation age less than 37 weeks, are factors relating to inadequate prenatal care, poor nutrition, lack of formal education, abject socioeconomic status, smoking, alcohol or drug abuse, and age of the mother. In 2001, 21.3 percent of births were either low birthweight or premature. These indicators differ markedly by race of the mother. Low birthweight was 80.8 percent higher among non-white mothers (7.8 for whites vs. 14.1 percent for non-whites). The rate of births that were either low birthweight or premature was 48.3 percent higher among non-white mothers (17.4 percent for whites vs. 25.8 percent for non-whites). National studies have shown that teenagers are more likely to deliver low birthweight babies, and this is the case in Mississippi. In 2001, 13.0 percent of the births to teenagers were low birthweight, and 19.2 percent were premature. The proportion of low birthweight between non-white and white also remained approximately the same.

A total of 607 congenital malformations were reported in 2001, for a rate of 143.6 per 10,000 live births. Other musculoskeletal/integumental anomalies was the category most frequently reported at 26.7 cases per 10,000, followed by polydactyl/syndactyl/adactylia at 17.0 and malformations of the heart at 11.6. Since 1980, malformation of the musculoskeletal system remains at, or near, the top of the anomalies reported at birth in Mississippi. The rates were 11.8 cases per 10,000 for whites and 44.2 cases per 10,000 for non-whites, an increase of almost 160 percent over year 2000. It should be noted that congenital anomalies are not well reported in the birth certificate. Many of these are not detected for months or even years after birth. Mississippi is currently implementing a birth defect registry, which will provide a much more accurate assessment of the incidence of congenital anomalies.

<p>Table III-1 Live Births, Birth Rates, and Fertility Rates (1997 - 2001)</p>					
	1997	1998	1999	2000	2001
Live Births	41,527	42,917	42,678	44,075	42,277
Percent Change	1.3	3.2	-0.6	3.3	(4.1)
White	22,021	22,950	22,652	23,540	22,798
Nonwhite	19,506	19,967	20,026	20,535	19,479
Birth Rates ¹	15.4	15.6	15.4	15.5	14.9
White	13.0	13.3	13.1	13.5	13.1
Nonwhite	19.5	19.3	19.3	18.7	17.7
Fertility Rates ²	66.1	68.2	67.9	69.4	66.6
White	59.5	62.9	62.3	65.0	63.0
Nonwhite	75.5	75.7	75.5	75.2	71.4

¹ Live births per 1,000 total population

² Live births per 1,000 females, 15 to 44 years old

Source: Vital Statistics Mississippi, 2001, Mississippi State Department of Health,
Bureau of Health Informatics

Figure III-1

Birth Rates, Mississippi 1997 to 2001
(Live Births per 1,000 Population)

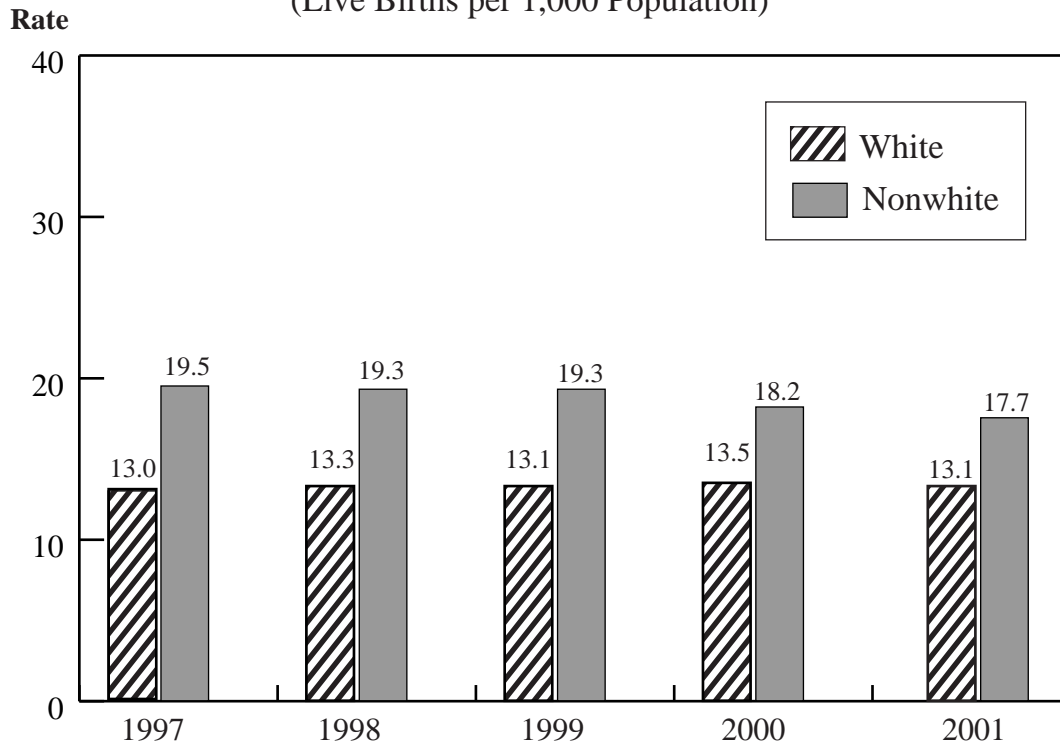
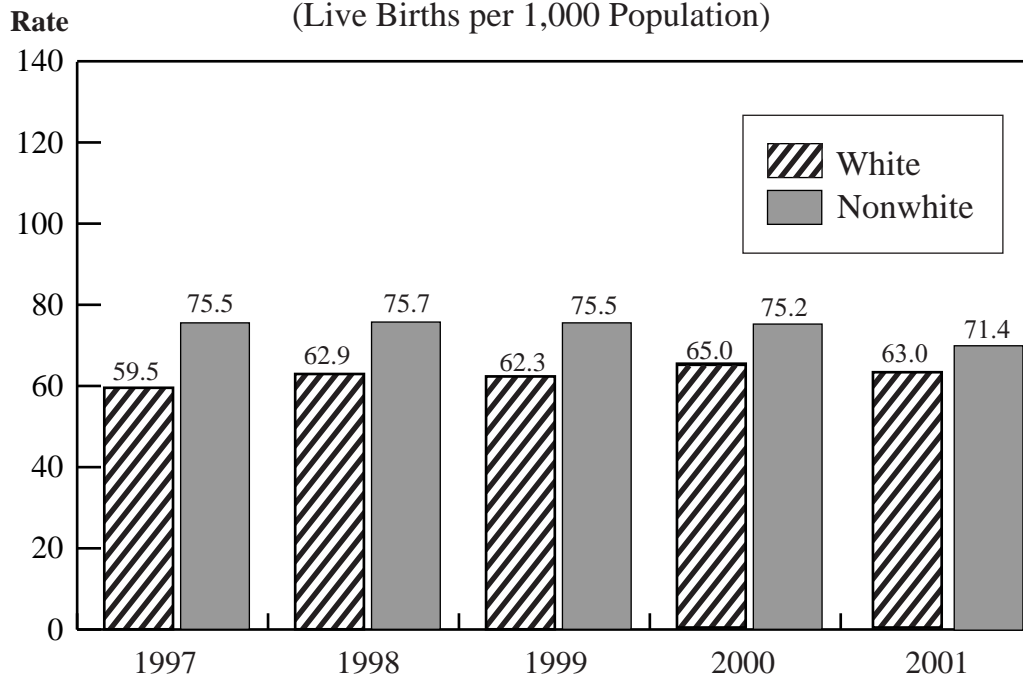


Figure III-2

Fertility Rates, Mississippi 1997 to 2001
(Live Births per 1,000 Population)



Babies Born to Mothers-At-Risk

Almost 73 percent of the live births in 2001 were associated with "at risk" mothers — 30,720 of the 42,277 total births, according to the Mississippi State Department of Health. The top ten counties for percentage of those born to mothers-at-risk are: Quitman, Claiborne, Tunica, Jefferson, Leflore, Coahoma, Sunflower, Holmes, Tallahatchie, and Sharkey. "At risk" factors include mothers:

- who are under 17 years of age or above 35 years of age;
- who are unmarried;
- who completed fewer than eight years of school;
- who had fewer than five prenatal visits;
- who began prenatal care in the third trimester;
- who have had previous terminations of pregnancy; and/or
- who have a short inter-pregnancy interval (prior delivery within 11 months of conception for the current pregnancy).

Mississippi experiences the highest percentages of births to teenagers in the nation, at 17.8 percent of all live births — a total of 7,536 children in 2001, slightly below the percentage reported in 2000 (18.8).

Mortality Statistics

Fetal Deaths

In 2001, there were 376 fetal deaths reported in Mississippi, a decrease from 465 reported in 2000 and 446 reported in 1999. The fetal death rate for non-whites has been more than twice that of whites for the past several years. In 2001, it was 13.7 per 1000 live births for non-whites compared to 4.8 for whites.

Mothers under age 15 had the highest fetal death ratio at 35.7 per 1,000 live births, followed by mothers aged 40-44, with a rate of 24.7. Mothers aged 35-39 had a ratio of 12.7. The MSDH requires the reporting of fetal deaths with gestation of 20 or more weeks or fetal weight of 350 grams or more.

Maternal Deaths

Maternal mortality refers to death resulting from complications of pregnancy, childbirth, or the puerperium within 42 days of delivery. Twelve such deaths were reported during 2001, an increase from eight reported in 2000. Some health care professionals believe that maternal deaths are under-reported.

Infant Deaths

Mississippi experienced 443 deaths of infants — children less than one year of age — during 2001, with 286 of those (64.6 percent) to non-white infants. The total included 277 neonatal deaths (within the first 27 days) and 166 postneonatal deaths (28 days to less than one year).

Disorders relating to short gestation and unspecified low birthweight (91); congenital malformations, deformity, and chromosomal abnormalities (78); sudden infant death syndrome (54); accidents (19); and maternal complications of pregnancy (14) constituted the five leading causes of infant deaths, 57.8 percent of all infant deaths, in Mississippi during 2001. Table III-2 presents the number of infant deaths and death rates for selected causes by race.

Approximately 59 percent of the neonatal deaths were from disorders relating to short gestation and unspecified low birth-weight (91), congenital anomalies (528), and maternal complications of pregnancy (14). Fifty-three percent of the postneonatal deaths were related to sudden infant death syndrome (50), congenital anomalies (20), and accidents (18).

Infant Mortality Rate

Overall, the infant mortality rate in Mississippi has declined since 1980. Figure III-3A shows that the year 2001 mortality rate for non-white infants is more than twice that for white infants — 14.6 deaths per 1,000 live births to 6.7 for whites. This difference is comparable to national figures. Many researchers believe that inadequate prenatal care among non-white mothers accounts for much of the disparity, as deficient care often results in low birthweight.

Figures 3B and 3C show the trend of neonatal mortality and postneonatal mortality for the past five years. In 2001, non-white infants had a neonatal mortality rate of 7.4 deaths per 1,000 live births, and white infants had a rate of 3.3 deaths per 1,000 live births. The postneonatal mortality rate was 7.2 for non-white infants and 3.4 for white infants.

In the five-year period 1997 through 2001, 38 counties in Mississippi had five-year average infant mortality rates above the five-year state average of 10.4 per 1,000 live births. None of the ten counties with the highest average infant mortality rates for the last five years had lower rates of live births to mothers-at-risk than did the state at large. Humphreys County reported the highest incidence of live births to teenagers and Jefferson Davis County reported the highest rate of low birthweight infants. Table III-3 lists the 10 counties with the highest average rates for this period and which accounted for 8.3 percent of the state's total live births in 2001. Table III-4 presents 2001 data for these counties contrasted with the state.

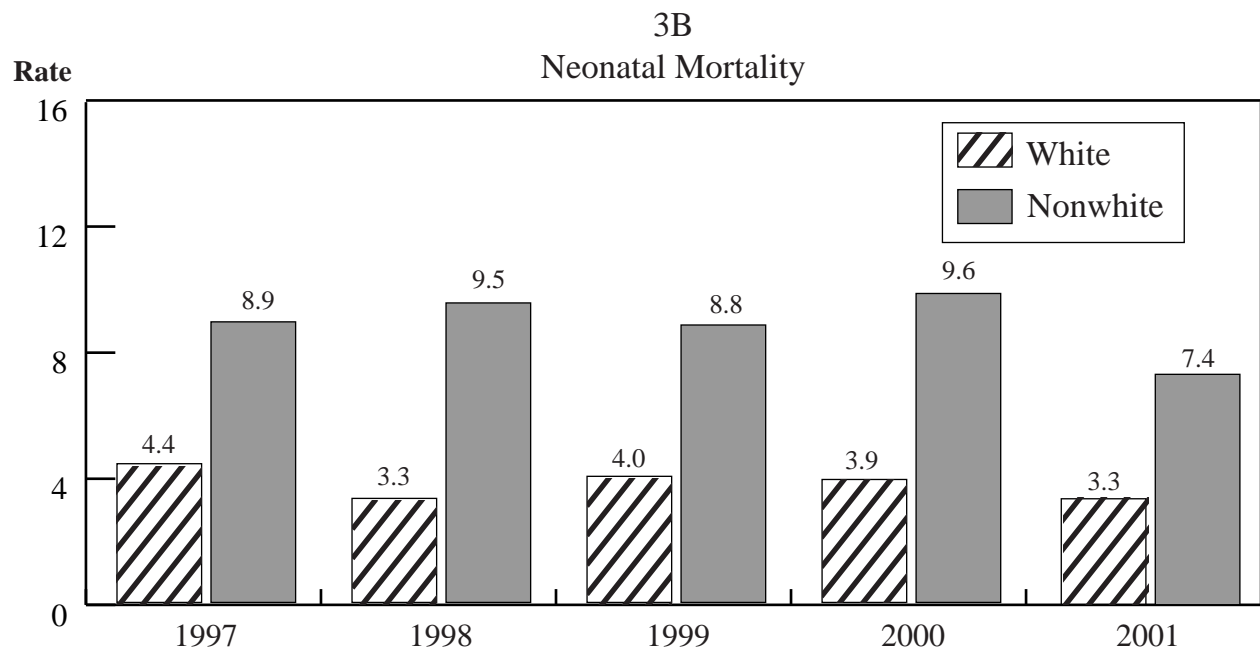
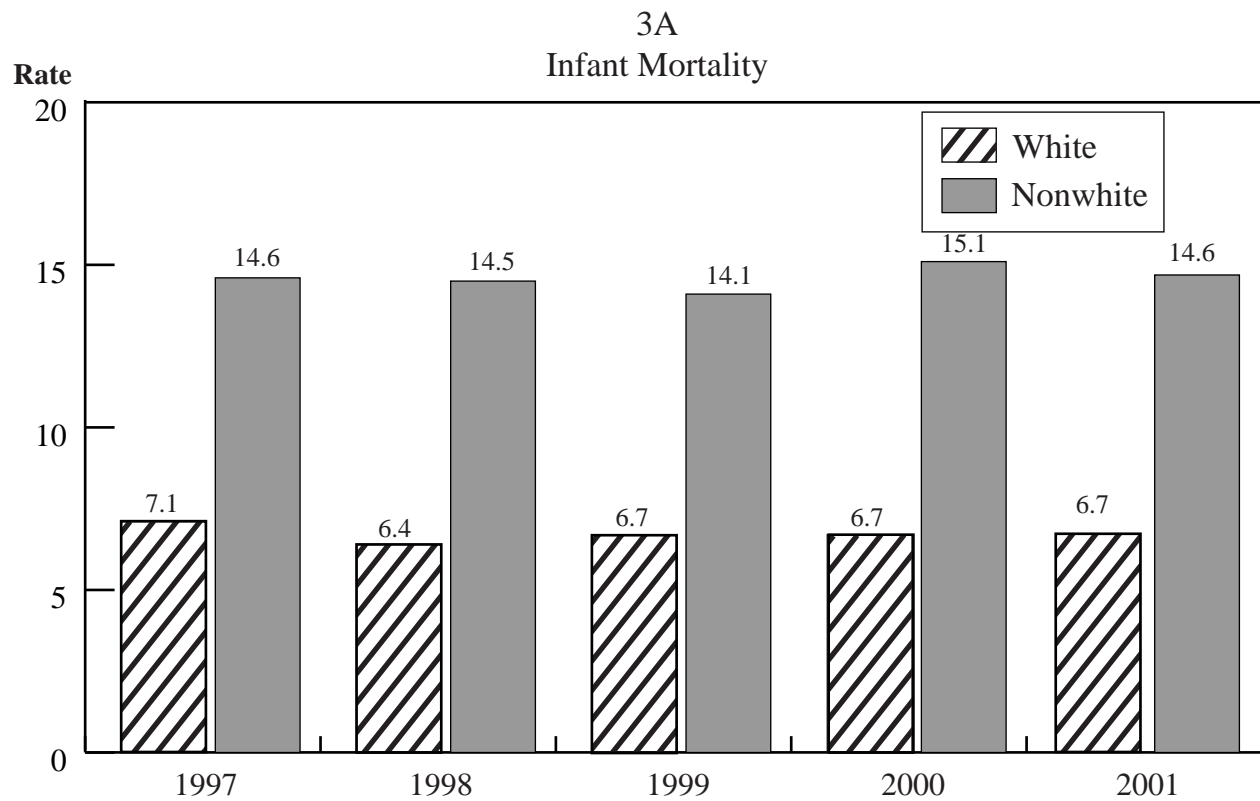
Table III-2
Deaths and Rates for Infants Under One Year
Selected Causes by Race
2001

Area	Number			Rate ¹		
	Total	White	Nonwhite	Total	White	Nonwhite
All Causes	443	157	286	104.8	68.9	146.8
Bacterial sepsis	9	1	8	2.1	0.4	4.1
Septicemia	7	2	5	1.7	0.9	2.6
Diseases of circulatory system	11	4	7	2.6	1.8	3.6
Respiratory distress syndrome	12	6	6	2.8	2.6	3.1
Gastritis, duodenitis, and noninfective enteritis and colitis	4	0	4	0.9	0.0	2.1
Intrauterine hypoxia and birth asphyxia	5	1	4	1.2	0.4	2.1
Pneumonia and influenza	6	2	4	1.4	0.9	2.1
Renal and other disorders of kidney	4	2	2	0.9	0.9	1.0
Congenital anomalies	78	46	32	18.4	20.2	16.4
Assault (homicide)	5	1	4	1.2	0.4	2.1
Maternal complications of pregnancy	14	5	9	3.3	2.2	4.6
Complications of placenta, cord and membranes	10	5	5	2.4	2.2	2.6
Other complications of labor and delivery	4	1	3	0.9	0.4	1.5
Disorders relating to short gestation and low birthweight	91	11	80	21.5	4.8	41.1
Intrauterine hypoxia and birth asphyxia	5	1	4	1.2	0.4	2.1
Pulmonary hemorrhage originating in perinatal period	11	1	10	2.6	0.4	5.1
Neonatal hemorrhage	8	4	4	1.9	1.8	2.1
Neonatal necrotizing enterocolitis	11	4	7	2.6	1.8	3.6
Hydrops fetalis not due to hemolytic disease	10	2	8	2.4	0.9	4.1
Sudden infant death syndrome	54	28	26	12.8	12.3	13.3
Accidents	19	8	11	4.5	3.5	5.6
Slow fetal growth and development	3	2	1	0.9	0.9	0.5
Atelectasis	7	2	5	1.7	0.9	2.6
All other causes	48	14	34	11.4	6.1	17.5

¹Rate per 10,000 live births

Source: Vital Statistics Mississippi, 2001, Mississippi State Department of Health,
Bureau of Health Informatics

Figure III-3
Mortality Rates Among White and Nonwhite Infants,
Mississippi 1997 to 2001



3C
Postneonatal Mortality

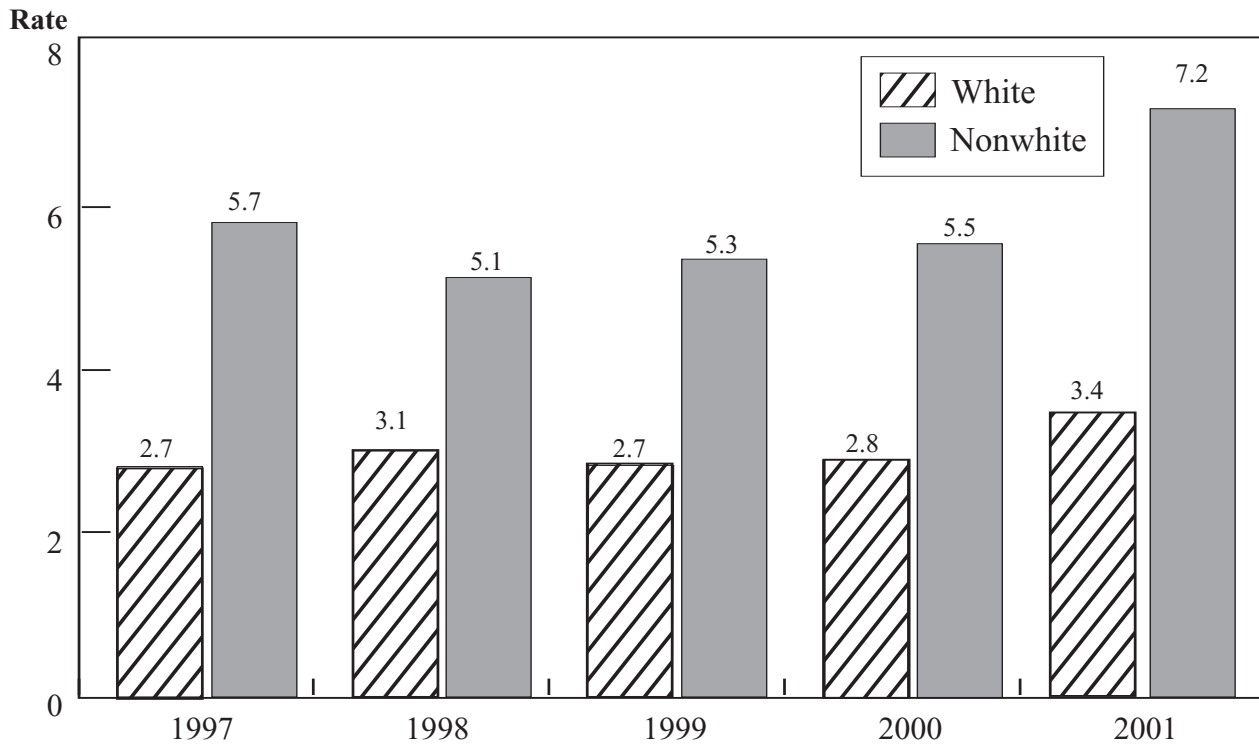


Table III-3
Mississippi Counties
Experiencing the Highest Infant Mortality Rate
1997 to 2001 (5-Year Average)

State/County	Rate ¹		
	Total	White	Nonwhite
Mississippi	10.4	6.7	14.6
Montgomery	27.1	13.9	36.8
Noxubee	24.8	6.6	32.1
Tunica	18.7	0.0	22.2
Copiah	17.0	8.3	22.7
Jeff Davis	14.3	9.0	17.0
Panola	13.8	9.9	16.3
Adams	13.6	11.8	14.6
Humphreys	11.8	5.4	13.2
Holmes	13.6	4.2	14.9
Claiborne	13.4	12.3	13.5
Kemper	13.4	0.0	18.1
Sunflower	13.4	5.7	15.2

¹Rate per 1,000 live births

Source: Vital Statistics Mississippi, 2001, Mississippi State Department of Health,
Bureau of Health Informatics

Table III-4
**Selected Data for Counties in Mississippi Having
the Highest 5-Year Infant Mortality Rates**
2001

State/County	Births to Mothers at Risk		Births to Teenagers		Low Birthweight Births	
	Number	Rate ¹	Number	Rate ¹	Number	Rate ¹
Mississippi	30,720	726.6	7,536	178.3	4.701	111.2
Montgomery	122	807.9	24	158.9	28	185.4
Noxubee	186	845.5	44	139.2	27	122.7
Tunica ¹	167	902.7	57	308.1	18	97.3
Copiah	307	728.8	77	181.6	62	146.2
Jeff Davis	127	742.7	33	193.0	27	157.9
Panola	490	798.0	135	219.9	60	97.7
Adams	364	810.7	76	169.3	58	129.2
Humphreys	337	873.1	97	251.3	42	108.8
Holmes	204	906.7	76	337.8	30	133.3
Claiborne	154	905.9	35	205.9	19	111.8
Kemper	99	727.9	25	183.8	20	147.1
Sunflower	429	875.5	138	281.6	79	161.2
Total	2,986	824.6	817	255.6	470	129.8

¹Rate per 1,000 live births in the specified area

Source: Vital Statistics Mississippi, 2001, Mississippi State Department of Health,
Bureau of Health Informatics

Deaths and Death Rates

There were 28,134 deaths reported in 2001, for a death rate of 9.9 per 1,000 population. The largest proportion of deaths occurred among whites aged 65 and older, at 49.9 percent (14,049) of the total. Non-whites in the same age group accounted for 19.6 percent (5,502).

Deaths among white males more than doubled that of females in the age group 15-44, with 872 males versus 384 females. The ratio of nonwhite males to nonwhite females in the same category was 1.7 to one. The overall death rate of females to males was one to 1.02. The following section discusses the cause of death for specific age groups.

Age-adjusted death rates allow comparisons between populations of differing age distributions. For the purpose of the *State Health Plan*, the age-adjusted death rate is the United States population in 2000. Table III-5 shows the Mississippi age-adjusted death rates for 2001. The total age-adjusted rate was 9.8 per 1,000 population: 12.3 per 1,000 whites and 10.5 per 1,000 non-whites.

Table III-5 Age-Adjusted Death Rates ¹ by Age and Race in Mississippi						
Age Group	Number			Rate		
	Total	White	Nonwhite	Total	White	Nonwhite
Total Deaths	28,134	18,774	9,360			
Crude Rates				9.9	10.8	8.5
Age Adjusted Rates				9.8	12.3	10.5
Age Specific Deaths and Death Rates						
Under 1	443	157	286	10.7	7.3	14.5
5-9	50	20	30	0.2	0.2	0.3
10-14	60	27	33	0.3	0.2	0.3
15-24	514	247	267	1.2	1.0	1.3
25-34	631	321	310	1.6	1.4	2.0
35-44	1,323	688	635	3.1	2.6	4.0
45-54	2,225	1,205	1,020	6.1	5.0	8.5
55-64	3,237	2,014	1,223	13.2	11.2	18.4
65-74	5,392	3,705	1,687	29.0	26.7	35.8
75+	14,159	10,344	3,815	89.7	89.4	90.7
Unknown	4	1	3	***	***	***

¹ Deaths per 1,000 population in the specified group
 Source: Vital Statistics Mississippi, 2001, Mississippi State Department of Health,
 Bureau of Health Informatics

Leading Causes of Death and Death Rates

Ten leading causes resulted in 80.6 percent of all deaths in Mississippi during 2001, as presented in Table III-6. Heart disease was the leading cause in both Mississippi and the United States. The death rate for the ten leading causes was more than 33.3 percent higher in the white population than the non-white population (8.8 and 6.6 per 1,000, respectively).

Cardiovascular disease (CVD), principally heart disease and stroke, is the leading cause of death in Mississippi and accounted for 41 percent of all deaths in 2001. Although commonly thought of as a condition of old age, CVD is responsible for a considerable amount of premature mortality; in 2001, one in five CVD deaths occurred in Mississippians under 65 years of age. African Americans have higher CVD death rates than whites, and men have higher rates than women. Three-quarters of Mississippians have at least one CVD risk factor (smoking, high blood pressure, high blood cholesterol levels, being overweight/obese, and lack of regular physical activity).

The second leading cause of death in 2001 was malignant neoplasms, with a mortality rate of 230.8 per 100,000 for whites and 173.1 for non-whites. Cancer of the respiratory and intrathoracic organs was the most common cause of cancer deaths among both white and non-white males, followed by cancer of the digestive organs and peritoneum. Among females, cancer mortality varied according to race. In white females, death from cancer of the respiratory and intrathoracic organs ranked first, followed by cancer of the digestive organs and peritoneum and then breast cancer. In non-white females, cancer of the digestive organs and peritoneum ranked first, followed by breast cancer and cancer of the respiratory and intrathoracic organs.

Table III-6
Number of Deaths, Death Rates, Percent of Total Deaths, and
Relative Risk for the Ten Leading Causes of Death
2001

Cause of Death	Number	Death Rate ¹	% of Total Deaths	Relative Risk ²
All Causes	28,134	989.0	100.0	0.8
Heart Diseases	9,010	316.7	32.7	0.7
Malignant Neoplasms	5,933	208.6	21.5	0.8
Cerebrovascular Diseases	1,927	67.7	6.7	0.8
Accidents	1,559	54.8	5.4	0.9
Emphysema and Other Chronic Pulmonary Diseases	1,325	46.6	5.8	0.3
Pneumonia and Influenza	750	26.4	2.9	0.6
Diabetes Mellitus	654	23.0	1.9	1.3
Nephritis, Nephrotic Syndrome and Nephrosis	598	21.0	1.8	1.3
Septicemia	489	17.2	1.6	1.1
Alzheimer's Disease	439	15.4	1.9	0.4
All Other Causes	5,450	191.6	19.4	1.0

¹Per 100,000 population

²Rate for nonwhites/rate for whites (i.e. nonwhites vs whites)

Source: Vital Statistics Mississippi, 2001, Mississippi State Department of Health,
Bureau of Health Informatics

Table III-7
**Five Leading Causes of Death by Age Group
and Percent of Deaths by Age Group**
2001

Age Group	Cause of Death	Number	Percent	Rate ¹
1 - 4	All Causes	96	100.0	0.6
	1. Accidents	45	46.9	26.0
	2. Congenital Anomalies	9	9.4	5.5
	3. Heart Disease	6	6.2	3.7
	4. Homicides	5	5.2	3.1
	5. Malignant Neoplasms	4	4.2	2.4
5 - 14	All Causes	110	100.0	0.2
	1. Accidents	65	59.1	14.9
	2T. Malignant Neoplasms	6	5.4	1.4
	2T. Homicide	6	5.4	1.4
	4T. Influenza and Pneumonia	3	2.7	0.7
	4T. Congenital Malformations and Deformations	3	2.7	0.7
15 - 24	All Causes	514	100.0	1.2
	1. Accidents	242	47.1	54.2
	2. Homicide	82	16.0	18.4
	3. Suicide	50	9.7	11.2
	4. Heart Diseases	23	4.5	5.2
	5. Malignant Neoplasms	16	3.1	3.6
25 - 44	All Causes	1,954	100.0	2.4
	1. Accidents	457	23.4	56.6
	2. Heart Diseases	299	15.3	37.0
	3. Malignant Neoplasms	260	13.3	32.2
	4. Homicide	158	8.1	19.6
	5. HIV Disease	137	7.0	17.0
45-64	All Causes	5,462	100.0	9.0
	1. Malignant Neoplasms	1,700	31.1	279.7
	2. Heart Disease	1,531	28.0	251.9
	3. Accidents	322	5.9	53.0
	4. Cerebrovascular Diseases	290	5.3	47.7
	5. Emphysema and Other Lower Respiratory Diseases	206	3.8	33.9
65 & Over	All Causes	19,551	100.0	56.9
	1. Heart Disease	7,140	36.5	2,078.5
	2. Malignant Neoplasms	3,945	20.2	1,148.4
	3. Cerebrovascular Diseases	1,568	8.0	456.4
	4. Emphysema and Other Lower Respiratory Diseases	1,095	5.6	318.8
	5. Pneumonia and Influenza	643	3.3	187.2

¹Deaths From All Causes per 100,000 Population: From Specific Causes per 100,000 Population

Source: Vital Statistic Mississippi, 2001, Mississippi State Department of Health, Bureau of Health Informatics

Table III-7 shows the five leading causes of death by age groups. Accidents were the leading cause of death for individuals less than 45 years of age; while malignant neoplasms led for individuals aged 45-64, followed by heart disease; and heart disease was also the leading cause of death for individuals aged 65 and older, followed by malignant neoplasms.

In the 15-24 year age group, 72.8 percent of all deaths were from external causes: accidents, homicide, and suicide. Motor vehicle accidents were responsible for 64.2 percent of all deaths from accidents and were the primary cause of accidental death among all age groups, except those under age one. The mortality rate for motor vehicle accidents was highest among the non-white male population.

Morbidity Statistics

The term *morbidity* is loosely interchangeable with the terms *sickness*, *illness*, and *disease* (including injury and disability). Morbidity statistics (prevalence and incidence), therefore, measure the amount of non-fatal illness or disease in the population. *Incidence* measures how rapidly new cases of a disease are developing, whereas *prevalence* measures the total number of cases, both new and long-standing, in the population. Accurate, reliable morbidity data are more difficult and costly to collect, compared to mortality data. Incidence data are available only for cancer. Prevalence data are collected for a limited number of diseases and risk factors through the Behavior Risk Factor Surveillance System (BRFSS) survey and the Youth Risk Factor Survey (YRBS). Hospital visit data in a limited geographic area are now being collected for asthma.

Cardiovascular Disease

Cardiovascular disease (CVD) includes heart disease, stroke, complications of hypertension, and diseases of the arterial blood vessels. In addition to causing almost half of all deaths in Mississippi, CVD is the major cause of premature, permanent disability among working adults. Stroke alone disables almost 2,000 Mississippians each year.

Overall, approximately eight percent of Mississippi adults (162,000 people) report having some kind of CVD, such as coronary heart disease, angina, previous heart attack, or stroke. The prevalence increases to 16 percent in the 55-64 year old age group, 20 percent in the 65-74 year old group, and 30 percent in the 75-84 year old group (BRFSS, 2000).

Several modifiable risk factors contribute significantly to CVD: smoking, high blood pressure, high blood cholesterol levels, sedentary lifestyle, and being overweight/obese. Three-fourths of adult Mississippians have at least one of these risk factors, and one-third of the population has at least two risk factors. In addition, diabetes is a major independent risk factor for CVD.

Smoking is the single most important modifiable risk factor for CVD. More than one-fourth (27 percent) of adult Mississippians are current smokers (BRFSS, 2000). This figure has been increasing since 2000, after staying constant for many years. Measures of tobacco use among Mississippi students are comparable to national figures: 68 percent have ever smoked cigarettes, compared to 64 percent nationally; 24 percent have smoked cigarettes during the past month, compared to 28 percent nationally; and 12 percent have smoked cigarettes on 20 or more of the past 30 days, compared to 14 percent nationally (YRBS, 2001).

The percentage of adult Mississippians reporting a high blood cholesterol level has changed little since 1990 and currently stands at about 31 percent (BRFSS, 2001). One-third of adult Mississippians have not had their blood cholesterol level checked within the past five years.

Mississippi has one of the highest rates of self-reported lack of regular exercise among U.S. adults: four out of five (81 percent) of adult Mississippians are not physically active on a regular basis (at least five days per week, for at least 30 minutes per day). Three out of five (61 percent) are sedentary (no regular exercise or only irregular exercise), and one out of three (33 percent) take no regular exercise whatsoever (BRFSS, 2002). These figures have changed little since 1990, though there has been a slight improvement in recent years.

Among Mississippi students, all measures of physical activity are worse (higher) than the national average: 68 percent of Mississippi students (87,000 out of 128,000 students) were not enrolled in a physical education class, compared to 48 percent nationally; 77 percent did not attend a physical education class daily, compared to 68 percent nationally; and 41 percent did not participate in moderate or vigorous physical activity in the week prior to the survey, compared to 31 percent nationally (YRBS, 2001).

Mississippi has had the highest rates of adult overweight and obesity in the nation for many years, and the rates have climbed steadily since 1990. There is no indication that these upward trends will level off any time soon. Overweight is defined as a body mass index (BMI) of 25 to 29.9, and obese is defined as a BMI of 30 or above. Currently, 36 percent of adult Mississippians are overweight and 27 percent are obese.

Among public high school youth, the problem is similar. The frequency of overweight students in Mississippi is higher than the national average: 14 percent of Mississippi students are overweight, compared to 10 percent nationally. An additional 15 percent of Mississippi students are at risk of becoming overweight, compared to 14 percent nationally. Mississippi ranks number two (second highest) in the nation for rates of overweight in high school students (YRBS, 2001). Overweight and obesity have become one of the state's most important and pressing public health problems, and the high and increasing rate of diabetes in the state is largely a consequence of the increasing rate of obesity.

Hypertension

Hypertension (high blood pressure) is a major risk factor for coronary heart disease (CHD) and heart failure, and it is the single most important risk factor for stroke. The high (and rising) prevalence is very likely an important reason for the high CHD and stroke mortality rates in the state. Mississippi is one of 11 states in the southeast region of the U.S. known as the "Stroke Belt"; this region has for at least 50 years had higher stroke death rates than other U.S. regions.

More than 640,000 adult Mississippians report having hypertension (BRFSS, 2001). This also is an important and serious public health problem in Mississippi – not only because of the high frequency of this condition in the population, but also because of the many problems related to treatment and control. Studies elsewhere have shown that many patients with hypertension are not receiving treatment, for various reasons, and that many of those who are being treated are not getting their blood pressures adequately controlled.

Diabetes

In 2002, approximately 180,000 Mississippians had diagnosed diabetes, and another 90,000 were estimated to have undiagnosed diabetes, for a total of 270,000 with this serious disease. The 2002 prevalence of diabetes in Mississippi was 8.6 percent; the state's prevalence ranked highest in the nation in 2000 (most recent national comparisons available), with a rate about 21 percent higher than the national average.

Approximately 1,700 Mississippians suffer significant complications related to diabetes each year. Diabetes is the primary cause of macrovascular disease, stroke, adult blindness, end-stage renal disease, and non-traumatic lower extremity amputations. Diabetes is an important risk factor for coronary heart disease, stroke, and various complications of pregnancy. More than 380,000 Mississippians are at risk of developing diabetes because of being overweight or having a sedentary lifestyle (BRFSS, 2001).

Asthma

Asthma is the sixth-ranking chronic condition in the nation and one of the most common chronic diseases in children. It is the number one cause of school absences caused by a chronic condition. Mississippi currently has no tracking systems in place for documenting actual asthma cases; the best estimates at this time are extrapolated from national estimates. The American Lung Association estimates 177,030 Mississippians have asthma, with one-fourth to one-third being under age 18.

Recently the MSDH began collecting hospital visit data for asthma in the three-county Jackson metropolitan area (Hinds, Madison, and Rankin counties); statewide data are not yet collected. These data show marked white:nonwhite disparities at all ages. The overall “prevalence” rate of unduplicated hospital visits for asthma in 2002 was 1,125 per 100,000 (crude) and 1,110 per 100,000 (age-adjusted). Nonwhite females had the highest age-adjusted rate, 2.5 times that of white females, or 150 percent higher (1,767 versus 707). Nonwhite males had an age-adjusted rate 2.7 times that of white males, or 170 percent higher (1,380 versus 507).

Cancer

Each year, more than 12,000 Mississippians are diagnosed with cancer. To meet the needs for information resulting from these diagnoses, the MSDH established a Central Cancer Registry; data collection for the registry began in 1996. The registry collects data from hospitals, as well as pathology laboratories and physicians as needed, and serves as a comprehensive resource for statewide cancer data including type of cancer, location of cancer, and stage of the disease at the time of diagnosis. Accurate knowledge of cancer type and incidence will help health care providers to anticipate future treatment and recovery needs; develop early detection programs to detect cancer at an earlier, more treatable stage; and activate prevention programs to reduce the occurrence of the disease.

In order of frequency, the top five sites of cancer diagnosis for 2002 were lung, breast, prostate, colorectal, and bladder. Approximately 5,933 Mississippians died of cancer during 2002. Lung cancer is the most common cause of cancer death; much of this cancer is due to cigarette smoking.

Communicable Diseases

Tuberculosis

Mississippi has historically exceeded the national new case rate of tuberculosis each year. The state had 134 cases in 2002, with a new case rate of 4.8 per 100,000 population. Approximately 86 percent of the new cases were pulmonary tuberculosis. Tuberculosis was diagnosed 1.8 times as frequently in males as females. Of the 134 reported cases, 81 (60.4 percent) were non-white, 53 (39.6 percent) were white.

Table III-8 lists the reported cases of selected communicable diseases for 2000-2002. *Sexually transmitted diseases* remain a public health problem in Mississippi, although syphilis rates have decreased

in recent years. A total of 48 cases of early syphilis were reported in 2002, a decrease from the 127 cases reported in 2001. Mississippi's case rate has historically been several times higher than the national rate. The state had 6,860 cases of gonorrhea reported in 2002, a case rate of 241.2 per 100,000 population, using 2000 U.S. Census data. This statistic may indicate that the state also has a problem with non-reportable sexually transmitted diseases such as herpes and lymphogranuloma venereum.

Acquired Immunodeficiency Syndrome (AIDS) received designation as a legally reportable disease in July 1983. By 1990, AIDS had become the tenth leading cause of death in the United States. Individuals engaging in certain risky behaviors have greater risk of contracting AIDS. These behaviors include sharing needles and/or syringes, having unprotected sex (anal, oral, or vaginal), having multiple sex partners, having a history of sexually transmitted diseases, abusing intravenous drugs, and having sex with a person engaged in one of these risky behaviors. There were 348 new cases of AIDS and 397 cases of HIV reported in Mississippi in 2002.

Hepatitis A is caused by a virus primarily transmitted between individuals through fecal or oral contact or through oral contact with items contaminated by infected human fecal waste. Potential contributing factors include poor personal hygiene, poor sanitation, overcrowding, and fecal contamination of food and water. Another form of hepatitis, ***Hepatitis B***, is transmitted by percutaneous or permacosal exposure to infected blood or blood products, sexual intimacy, and inutero maternal-infant contact. The ***Hepatitis C*** virus is transmitted through percutaneous or permacosal exposure to infected blood, e.g. shared needles. There were 62 reports of Hepatitis A, 93 reports of Hepatitis B, and 154 reports of Hepatitis C in Mississippi during 2002.

Meningitis is an inflammation, usually due to infection of the piarachnoid and the fluid it contains. Infecting agents include viruses, bacteria, fungi, or parasites. The disease involves both the brain and the spinal cord; and in bacterial meningitis, the outcome is potentially fatal. Meningitis is more common in the first year of life. Infants less than one year old have an incidence rate 6.5 times higher than children one to four years old and 38 times higher than children five to nine years old.

Viral Meningitis, as the name suggests, is caused by a virus. It is usually self-limiting and seldom fatal. The incidence of meningitis usually peaks in the late summer and fall. Cases of meningitis decreased from 109 in 2001 to 47 in 2002. Table III-8 shows the etiology of the 1999-2001 cases. These figures are updated and may not exactly match those reported in previous years.

Salmonellosis is an infection caused by the ingestion of organisms from the *Salmonella* species. Symptoms of the disease are severe diarrhea, cramps, and fever. The MSDH received 1,175 reports of salmonellosis cases in 2002, a 29.3 percent increase from the 909 cases reported in 2001.

Shigellosis has symptoms and modes of transmission similar to salmonellosis. The infection increased dramatically from a low of 63 reported cases in 1998 to 590 cases in 2001; then declined to 346 new cases in 2002.

Table III - 8
Reported Cases of Selected Communicable Diseases
 2000 - 2002

Diseases	2000	2001	2002
<u>Sexually Transmitted Diseases</u>			
Primary and Secondary Syphilis	140	127	48
Other Syphilis	419	468	152
Chlamydia	12,435	11,564	11,816
Gonococcal Infections	9,065	7,589	6,860
Acquired Immunodeficiency Syndrome	342	355	348
Other HIV	417	375	397
<u>Viral Hepatitis</u>			
Type A	139	39	62
Type B	107	105	93
Type C (Non-A, Non-B)	99	22	154
<u>Enteric Diseases</u>			
Salmonellosis	691	909	1,175
Shigellosis	225	590	346
Campylobacter Disease	N/A	128	108
<u>Central Nervous System Diseases and Other Invasive Diseases</u>			
Viral Meningitis	58	109	47
Invasive Meningococcal Infections	16	20	19
Invasive H. Influenza Meningitis	3	2	10
<u>Other Diseases</u>			
Rocky Mountain Spotted Fever	17	21	36
Animal Rabies (bats only)	1	4	4

Source: Mississippi Provisional Morbidity Report, February 2002,
 Mississippi State Department of Health

Occupational Injuries and Illnesses

The Mississippi Worker's Compensation Commission produces an annual report on work place injuries and illnesses using information compiled from accident report forms that employers must submit to the Commission. The report shows that work-related injuries and illnesses place significant demands on industry. Such information helps industry to focus on safe work practices and injury prevention through the implementation of safety programs.

Statistical highlights of the Commission's *2001 Annual Report of Occupational Injuries and Illnesses* (most recent available) are as follows:

- During 2001, 105 employees suffered fatalities.
- Employees sustained 14,685 work-related injuries or illnesses that resulted in absence from work for six or more work days during 2001.
- Injuries to females were reported less frequently than males, with 5,755 claims.
- Strains remained the most common type of injury with 5,137 claims.
- Pain in the lower back (the part of the body most often affected) resulted in 2,561 claims (17.4 percent).
- Hinds County had the highest number of reported occurrences with 1,878 claims (12.8 percent).
- Injuries or illness associated with lifting accounted for 2,431 claims (16.6 percent).
- Major injuries or illnesses occurred on Monday more than any other day of the week with 2,835 claims (19.3 percent). October's reports exceeded other months with 1,335 claims (9.1 percent), followed by April with 1,323 claims (9.0 percent), and May with 1,300 (8.9 percent).
- Controversial claims totaled 5,410 or 36.8 percent of claims filed.
- Insurance carriers and self-insurers paid a total of \$270,926,064 in 2001: \$169,536,834 by insurance companies and \$101,389,230 by self-insurers.
- The top five industries reporting work-related injuries and illnesses during 2001 were:

Industry	Number of Job-Related Injuries/Illnesses	Percentage of Total
Manufacturing	3,395	23.1
Services	3,256	22.2
Retail Trade	1,820	12.4
Construction	1,280	8.7
Transportation/Utilities	960	6.5

Expectation of Life at Birth

Statistics show that the average life expectancy of a Mississippi baby born between 1990 and 1992 is 73.1 years. Life expectancy increased by 0.6 years during the previous decade. Racial differences in life expectancy have decreased, but differences in the life expectancy of the sexes have widened each decade.

White females have the longest life expectancy, while non-white males have the shortest. A white female can expect to live about 21 percent longer than a non-white male, a difference of more than eight

years. If these rates prevail throughout their lifetimes, almost 95 percent of white females will reach age 50, compared to only 81 percent of non-white males.

Natural Increase

Natural increase (the excess of births over deaths) added an estimated 14,143 persons to Mississippi's population during 2001. The rate of natural increase for the year was 5.0 persons per 1,000 estimated population. Natural increase has declined since 1980, when the rate was 9.6 persons per 1,000 estimated population, although this decline has fluctuated at times. In 2001, the rate of natural increase in the state was 2.3 persons per 1,000 estimated white population and 9.2 persons per 1,000 estimated non-white population.

Minority Health Status

Compared to all other ethnic groups, the *American Medical News* reports that African Americans experience higher rates of illness and death from virtually every health condition—from asthma to diabetes to cancer. African Americans in Mississippi face substantially higher rates of teen pregnancy, births to unmarried mothers, infant mortality, and other health status indicators than do white Mississippians. Some disparities which impact health care include economic and geographic factors.

Mississippi ranked 50th among the states in median family income at \$39,520 in 2001 inflation-adjusted dollars. Sixteen percent of Mississippi families live below the poverty level, compared to 9.2 percent for the U.S. Poverty dictates a standard of living that diverts all income to the essential needs of food, clothing, and shelter; therefore, it is difficult for the impoverished to afford good quality health care.

Officials estimate that 22 percent of Mississippians have no health insurance. Across all ethnic groups, lack of insurance results in weak connections to health care services. Uninsured persons, in fair or poor health, visit physicians less often than their insured counterparts; they are less likely to receive care needed to manage chronic conditions such as diabetes or high blood pressure. Uninsured children and adults are less likely to receive preventive health services or care for acute conditions.

The frequently cited explanation for the disparity in health care for African Americans is “lack of access to quality health care”. The Henry J. Kaiser Family Foundation commissioned a synthesis of the literature on *Racial and Ethnic Differences in Access to Medical Care* in 1999. For most uninsured persons, low incomes and unemployment make insurance coverage unaffordable without substantial financial assistance. Overall, 57 percent of the uninsured are poor or near poor, with family incomes below 200 percent of the poverty level.

Rural areas, particularly those with a high concentration of poor blacks, often have very few medical resources. This fact further limits access to primary health care. As of April 200, 64 counties or portions of counties in Mississippi were designated as health professional shortage areas for primary medical care.

Minorities are also under-represented in the health professions. Many medical schools have taken pro-active steps to increase minority representation. According to the Agency for Healthcare Research and Quality, *Strategies to Reduce Health Disparities, 2001 Conference*, Louisiana and Mississippi applications for minorities to enter medical schools declined 17 percent (2.3 times more than the national average). Even more alarming is that the percentage of applicants accepted declined 27 percent (seven times that of the national average). There was also a drop in minority matriculation by 26 percent (six times greater than the national average).

In 2002, only 6.36 percent of Mississippi's total active physicians were black and 6.59 percent were Asians. Based on an estimated non-white population of 1,157,960 (38.7 percent of the total 2005 estimated population), the state has one minority physician for every 1,359 non-white persons. Considering black physicians only, there is one black physician for every 3,199 non-white persons; 252 or 69.6 percent, of the state's black physicians were primary care physicians.

Key health problems across the life span of blacks in Mississippi include:

Infant Years:	Infant Mortality
Childhood Years:	Accidents Cancer Dental Health Poor Nutrition
Teenage/Young Adult Years:	Teenage Pregnancy Drugs Motor Vehicle Accidents
Mature Adult Years:	Homicide Accidents
Elderly Years:	Heart Disease Stroke Hypertension Diabetes Cancer